

BEST STUDENT PRESENTATION AWARDS AT THE 1996 ANNUAL MEETING OF THE TENNESSEE ACADEMY OF SCIENCE

Oral Presentations

Botany:

First Place—Lisa Griggs, "Effects of Heavy Metals on *Glycine max*"

Second Place—Steven M. Howell, "Effect of Herbivory and Resource Availability on Seedling Establishment and Recruitment in a Chestnut Oak Population (*Quercus prinus*) on the Cumberland Plateau in Southeastern Tennessee"

Third Place—John K. Hiers, "Effect of Anthracnose Blight on Dogwood Mortality and Forest Community Structure in Southeastern Tennessee"

Chemistry:

Section I—Ying Yang, "Effects of Diet and Cosmetics on Human-skin-oil Gas Chromatographic Profiles"

Section II—Justin H. Hasford, "Conformational and Electronic Control of Flavin Redox Chemistry"

Cell and Molecular Biology: Dana McDonald, "Hormonal Effects on P-53 and C-myc Expression in Goldfish (*Carassius auratus*)"

Engineering: Karena Swisher, "Structure and Properties of Thermosetting Silicone Polymers for Crankcase-heater Inserts"

Geology and Geography:

Jennifer M. Kocak, "Regulating the Regulators: A Case Study for for Coercive Regulation of the Boating Industry," and

Lee Bacon, "Choosing a State Fossil for Tennessee: Consideration and Choices"

Math and Computer Science: Daniel S. Studer, "Preliminary Results on Induced-paired Dominating Sets"

Microbiology:

First Place—Thomas H. Rhodes, "RNA Bacteriophage Binding to F⁺ and Hfr Mating Types of *Escherichia coli*"

Second Place—Lisa M. Finch, "Growth Conditions Allowing for Expression of Tyrosine Decarboxylase in *Chromobacterium violaceum*"

Physics and Astronomy: Nathan A. Carter, "A Method for In Vivo Detection and Characterization of Aneurysm Clips for MR Imaging"

Science and Math Teachers: Penny L. Mauldin, "Selection and Evaluation of Experiments in Instrumental Analysis for Schools with Limited Instrumental Resources Utilizing the Inquiry-Oriented Approach"

Zoology:

Section I—Elizabeth Grey, "The Evolution of Courtship Behavior in *Schizocosa*: A Phylogenetic Analysis"

Section II—Alan K. Bottomlee, "Macroinvertebrate and Fish Community Response to Artificial Riffles Constructed in a Channelized Stream in Henry County, Tennessee: Preliminary Results"

Poster Presentations

Botany:

First Place—Alexandra L. MacKinlay, "Effect of Weevil Larvae (*Curculio* spp.) on Germination and Seedling Growth in Chestnut Oak (*Quercus prinus*)"

Second Place—Robert A. Jackson, "Demography of Pignut Hickory (*Carya glabra*) in a Barrier Island Maritime Forest Overpopulated by Feral Hogs and White-tailed Deer"

Third Place—Timothy D. Neville, "Importance of Wood As Substrate for Primary Producers in the Streams of the West Sandy Creek Watershed of Henry County"

Chemistry:

First Place—Stephanie Steelman, "Reactions of the 9-t-Butyl Fluorenyl Radical and TEMPO: Rate Determination by Fast Scan Cyclic Voltammetry and Digital Simulation"

Second Place—David O'kin, "Utilization of Tryptophan Synthase in the Preparation of Tryptophan Analogs"

Third Place—Charlotte Morgan, "Lemon Batteries Revisited: The Lemon-powered Calculator"

Engineering:

First Place—Jin Ye, "Mathematical Model of Cerebral Blood Flow During Degrees of Cerebral Vascular Dilation"

Second Place—Heui Seong Lim, "Signal Analysis Method to Improve Reliability of Flow Measures of Condensers and Boilers"

Geology and Geography: Mary D. Wilson, "A Statistical Analysis of Tennessee Topography"

Physics and Astronomy: Vernita D. Gordon, "Modeling and Analysis of Trapped Ion Extraction"

Zoology:

First Place—Jamie DeLay, "Bacterial Acquisition by *Rhodnius prolixus* (Hemiptera: Reduviidae)"

Second Place—Regina L. Courtney, "Effects of Agonistic Displays on Spermatogenesis in the Green Anole, *Anolis carolinensis*"

Third Place—Holly C. Tidwell, "Effects of Temperature on Social Interactions in the Green Anole, *Anolis carolinensis*"